

10/539373

JCSO PATE PCT/PTO 16 JUN 2005 #3

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q88645

Yoshiyuki FUKUMOTO, et al.

Appln. No.: Not yet assigned

Confirmation No.: Not yet assigned

Group Art Unit: Not yet assigned

Filed: June 16, 2005

Examiner: Not yet assigned

For: MAGNETO-RESISTANCE DEVICE AND METHOD OF MANUFACTURING THE SAME

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.97 and 1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

1. Japanese Patent Publication No. 2000-20922, published January 21, 2000.
2. S. Cardoso et al., *Influence of Ta antidiffusion barriers on the thermal stability of tunnel junctions*, Applied Physics Letters (Vol. 78, May 7, 2001, pp. 2911-2913)(the second conventional example).
3. European Patent Publication No. 1 033 764, published September 6, 2000.
4. U.S. Patent Publication No. 2002/0044396, published April 18, 2002.

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National Stage Entry of PCTJP0316067

5. Japanese Patent Publication No. 62-132211, published June 15, 1987.
6. Japanese Patent Publication No. 3-268216, published November 28, 1991.
7. European Patent Publication No. 1 202 357, published May 2, 2002.
8. Japanese Patent Publication No. 2002-329903, published November 15, 2002.
9. Japanese Patent Publication No. 2003-273420, published September 26, 2003.
10. J.J. Sun et al., *Low resistance and high terminal stability of spin-dependent tunnel junctions with synthetic antiferromagnetic CoFe/Ru/CoFe pinned layers*, Applied Physics Letters (Vol. 76, April 24, 2000, pp. 2424-2426).
11. S. Cardoso et al., *Influence of Ta antidiffusion barriers on the thermal stability of tunnel junctions*, Applied Physics Letters (Vol. 76, June 19, 2000, pp. 3792-3794).
12. T. Ochiai et al., *Improved Thermal Stability of Ferromagnetic Tunnel Junctions With a CoFe/CoFeO_x/CoFe Pinned Layer*, IEEE Transactions on Magnetics, (Vol. 39, September, 2003, pp. 2797-2799).

<u>Serial No.</u>	<u>Applicant's Name</u>	<u>Filing Date</u>
10/697,124	Yoshiyuki Fukumoto	October 31, 2003

One copy of each of the listed documents is submitted herewith, except for the following:
co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

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National Stage Entry of PCTJP0316067

filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, references 1, 5 and 6 are cited within the specification beginning at page 5, line 7, page 10, line 25 and page 11, line 7, respectively. Regarding references 8 and 9, enclosed herewith is a copy of the International Search Report which cites these documents, indicating the degree of relevance found by the foreign patent office.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: June 16, 2005

Substitute for Form 1449 A & B/PTO <u>INFORMATION DISCLOSURE</u> <u>STATEMENT BY APPLICANT</u> <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	Not yet assigned
				Confirmation Number	Not yet assigned
				Filing Date	June 16, 2005
				First Named Inventor	Yoshiyuki FUKUMOTO
				Art Unit	Not yet assigned
				Examiner Name	Not yet assigned
				Attorney Docket Number	Q88645
Sheet	1	of	2		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code ² <i>(if known)</i>		
		US 2002/0044396	A1	04-18-2002	Amano et al.
		US 2004/0145850	A1	07-29-2004	Fukumoto et al.
		US			
		US			
		US			
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ <i>(if known)</i>			
		JP	2000-20922	A	01-21-2000		
		EP	1033764	A2	09-06-2000		
		JP	62-132211	A	06-15-1987		
		JP	3-268216	A	11-28-1991		
		EP	1202357	A2	05-02-2002		
		JP	2002-329903	A	11-15-2002		
		JP	2003-273420	A	09-26-2003		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation ⁶
		S. Cardoso et al., Influence of Ta antidiffusion barriers on the thermal stability of tunnel junctions, Applied Physics Letters (Vol. 78, May 7, 2001, pp. 2911-2913)(the second conventional example).	
		J.J. Sun et al., Low resistance and high terminal stability of spin-dependent tunnel junctions with synthetic antiferromagnetic CoFe/Ru/CoFe pinned layers, Applied Physics Letters (Vol. 76, April 24, 2000, pp. 2424-2426).	
		S. Cardoso et al., Influence of Ta antidiffusion barriers on the thermal stability of tunnel junctions, Applied Physics Letters (Vol. 76, June 19, 2000, pp. 3792-3794).	
		T. Ochiai et al., Improved Thermal Stability of Ferromagnetic Tunnel Junctions With a CoFe/CoFeOx/CoFe Pinned Layer, IEEE Transactions on Magnetics, (Vol. 39, September, 2003, pp. 2797-2799).	

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to indicate here if English language Translation is attached.